

REMARKS

The Office Action mailed on December 23, 2003, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-30 were pending in the present application, with claims 22-27 being withdrawn. By this paper, Applicants do not cancel or add any claims. Therefore, claims 1-21 and 28-30 remain pending in the present application.

Applicants respectfully submit that the present application is in condition for allowance for the reasons that follow.

Indication of Allowable Subject Matter

Applicants thank examiner Huffman for indicating that claims 13-19 contain allowable subject matter.

Claim Objections

Claims 10, 11, 19 and 21 stand objected to as containing informalities. As seen above, Applicants have amended these claims, and respectfully request reconsideration in view of these amendments.

Rejections Under 35 U.S.C. § 102

Claims 1-6, 8, 12, 20, 21 and 28-30 stand rejected under 35 U.S.C. §102(b) as being anticipated by Katsuyama (USP 5,854,643). In response, Applicants respectfully submit that the above claims are allowable for the reasons that follow.

Applicants rely on MPEP § 2131, entitled "Anticipation – Application of 35 U.S.C. 102(a), (b), and (e)," which states that a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." It is respectfully submitted that Katsuyama does not describe each and every element of the allegedly anticipated claims.

For example, claims 1 and 28, the independent claims under consideration in the application, recite that the printer comprises “a set of **non-movable** print heads fixed to the frame” of the printer and “a set of **non-movable** print head means fixed to the frame” of the printer, respectively. (Emphasis added.) It is respectfully submitted that Katsuyama does not anticipate these claims, at least because Katsuyama fails to teach “non-movable” print heads/means. The Office Action cites element 1010 and column 10, lines 11-14 of Katsuyama as teaching the above identified recitation. While the cited passages do teach print heads, it is silent in regard to **non-movable** print heads. Indeed, Katsuyama explicitly teaches that element 1010 is movable: “a carriage 1010 is installed on the printing unit 1000 *movably* . . . [and] [d]uring the *traveling period of the carriage 1010*, printing is performed by means of two ink jet heads installed on the carriage.” (Katsuyama, col. 5, lines 13-17, emphasis added.) Thus, Katsuyama fails to teach “non-movable” print heads/means, and thus claims 1 and 28 and their dependent claims are allowable for at least this reason.

Still further, Katsuyama fails to teach the recitation of claim 3 that “the idler carriage is disposed to *slide linearly along the slide shaft*.” The Office Action identifies elements 145 and 151 of Katsuyama as teaching this recitation. Element 151 is not a slide shaft, as Katsuyama identifies element 151 as “a ball *screw*” which “engages with a ball *screw nut* 152” so that the fixing plate 150 is caused to move causing the rollers to shift upward or downward. (Katsuyama, col. 7, lines 11-27, emphasis added.) That is, element 151 functions as a jack screw to vary the position of the rollers, and thus the alleged idler carriage of Katsuyama does not slide linearly along element 151. Indeed, it cannot slide linearly because the threads of the ball screw 151 will catch on the screw nut 152, which is physically necessary to enable the ball screw to vary the position of the rollers of Katsuyama.

Element 145 is also identified as a slide shaft in the Office Action. True, Katsuyama does teach that Element 141L “is arranged to slidably engage with the linear guide shaft 145 through the holes formed on both ends thereof.” (Katsuyama, col. 6, lines 58-60.) However, the Office Action identifies element 141U (as in “Upper”), not element 141L (as in “Lower”), as an idler carriage for carrying a web, and thus guide shaft 145 of Katsuyama cannot meet the recitations of claim 3 and also comport with the analysis of the patentability of claim 1

presented in the Office Action. Elements 141L do not meet the requirement of *an idler carriage* for carrying a web, as the cloth 1 of Katsuyama, assumed *arguendo* to be a web, only passes over rollers 140U supported by element 141U, and is not carried by rollers 140L which are supported by elements 141L. Thus, there is no “idler carriage disposed to slide linearly along a slide shaft” in Katsuyama. Further, Katsuyama explicitly teaches that elements 141U (identified in the Office Action as meeting the recitation of an idler carriage) do not slide with respect to guide shafts 145: “to both ends of the upper supporting board 141U, one end of a linear guide shaft 145 is *fixed*.” (Katsuyama, col. 6, lines 56-57, emphasis added.) Thus, claim 3 is allowable for yet another reason.

Claim 4 is allowable because Katsuyama fails to teach that a slide shaft as claimed moves within a bearing set in an idler carriage. As discussed above, element 151 is not a slide shaft, and thus a slide shaft does not move within Katsuyama’s bearing 154. Since Katsuyama fails to teach a bearing utilized in conjunction with guide shafts 145, and in fact teaches away from such a recitation (Fig. 5 shows the guide shafts 145 passing through elements 140L without a bearing), claim 4 is allowable for yet another reason.

Claim 5 is allowable because Katsuyama fails to teach “an accumulator structure for taking up *slack in the web* as the idler carriage moves. (Emphasis added.) The device of Katsuyama is directed towards keeping the tension of “**an endless conveying member**” 130, which **supports** a cloth 1 (assumed *arguendo* to be a web), constant. That is, the tension that is controlled in Katsuyama is the tension of a conveyor belt, not of a web. This is evinced by the passage of Katsuyama identified in the Office Action as anticipating claim 5: It is “an object of the present invention to provide a printing apparatus capable of making the tension exerted on an endless conveying member substantially constant.” (Katsuyama, col. 2, lines 53-57, emphasis added.) Therefore, Claim 5 is allowable in view of the deficiencies of Katsuyama. Claim 6, which also recites an accumulator as claimed in claim 5 is likewise allowable.

Claim 8 is allowable due to its dependency from claim 5, and also because the elements of Katsuyama identified in the Office Action as teaching an accumulator roll tensioner do not anticipate an accumulator roll tensioner for automatically positioning an

accumulator roll *in response to* movement of an idler carriage. The Office Action identifies rollers 140U as accumulator rollers and springs 142 as accumulator roll tensioners. However, these same rollers are directly mounted on element 141U and thus are move exactly with element 141U, which, as noted above, is identified in the Office Action as an idler carriage. Thus, while rollers 140U may vary the tension in the web; they do not “**maintain**” a tension in the web.

In rejecting claim 12, the Office Action cites element 141L as teaching a fixed block which sets the upper position of an idler carriage. Element 141L is a support structure for supporting rollers 140L. Element 141L moves with element 141U, identified in the office action as being an idler carriage. (See Katsuyama, cols. 6-7, lines 66-6). It has nothing to do with setting the upper position of an idler carriage. Further, element 141L is not fixed. As the just identified passage of Katsuyama indicates, element 141L moves. Thus, claim 12 is allowable.

Claim 29 is allowable because Katsuyama fails to teach “a means for taking up slack in the web as the idler carriage means moves,” as is interpreted under 35 U.S.C. 112, second paragraph in view of the teachings of the specification. The Office Action fails to cite a teaching in Katsuyama that anticipates claim 29. If claim 29 is again to be rejected in view of Katsuyama, Applicants respectfully request that an explicit teaching of Katsuyama be identified that teaches the elements of claim 29.

Claim 30 is allowable because Katsuyama fails to teach “a means for setting alternate upper positions of the idler carriage means,” as is interpreted under 35 U.S.C. 112, second paragraph in view of the teachings of the specification. Like claim 29, the Office Action fails to cite a teaching in Katsuyama that anticipates claim 30. If claim 30 is again to be rejected in view of Katsuyama, Applicants respectfully request that an explicit teaching of Katsuyama be identified that teaches the elements of claim 30.

Claim Rejections Under 35 U.S.C. §103(a)

In the Office Action, Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over Katsuyama in view of Kurata (USP 6,068,374), with claims 9-11 being

rejected under the same statute in view of these references when combined with Regev (USP 6,652,054). Applicants respectfully traverse the rejection as to the claims above, and submit that these claims are allowable for at least the following reasons.

Applicants rely on MPEP § 2143, which states that:

[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first and third criteria of MPEP § 2143 have not been met in the Office Action.

The Cited References Do Not Suggest All Claim Recitations

Even if the first requirement of MPEP § 2143 was satisfied in the Office Action (which it is not, as explained below), the cited references still do not meet the third requirement, which is that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

The Office Action acknowledges that Katsuyama fails to teach an accumulator according to claim 7, relying instead on the teachings of Kurata to remedy the deficiencies of Katsuyama. First, as seen above, Katsuyama fails to teach the recitations of claim 5, and Kurata fails to remedy at least this particular deficiency of Katsuyama. In fact, Kurata teaches away from the accumulator of claim 5, which is a “structure for taking up slack in the web as *the idler carriage moves*.” (Claim 5, emphasis added.) In contrast, the alleged accumulator of Kurata utilizes a roller 2210 mounted on a pneumatic cylinder 2220 to compensate for a sudden starting and stopping of the web 1, as is taught in the passages of Kurata relied on in the Office Action (cols. 41-42, lines 51-14.) That is, the alleged accumulator of Kurata does not meet the requirements of an accumulator according to claim 5, and therefore claim 7 is allowable for at least this reason.

Second, Kurata does not teach or suggest a leg disposed at an end of an idler carriage and extending away from a print head, nor does Kutara teach or suggest an idler roller disposed at the end of the leg. The Office Action alleges that Figs. 43A and 43B of Kurata disclose such an arrangement. However, the alleged accumulator of Kurata utilizes a roller 2210 mounted on a pneumatic cylinder 2220. (Applicants request that if a rejection is to be maintained in view of these references, the PTO identify which elements of Kutara teach a leg as claimed.) Further, none of the elements of Kurata relied on in the Office Action to teach the elements of this claim are disposed at an end of an idler carriage, as is required by the claim. Thus, Kurata fails to teach all of the recitations of claim 7, and therefore, claim 7 is allowable in addition to the above presented reasons why claims 1 and 5 are allowable.

Claims 9-10 are allowable because neither Katsuyama nor Regev teach an accumulator roll tensioner as claimed in claim 8 including a piston actuator *that is controlled by a signal indicative of the movement of an idler carriage*. That is, in addition to the recitation that a piston actuator is used, claims 9 and 10 contain recitations relating to the control of the piston actuator. The Office Action introduces Regev to teach a piston actuator. However, the Office Action fails to indicate where in Regev a teaching may be found that the piston actuator is controlled by a signal indicative of a movement of an idler carriage, and further fails to introduce another reference to remedy this apparent deficiency of Regev. Neither Katsuyama nor Regev, alone or in combination, disclose or suggest the recitations of claims 9 and 10. Therefore, these claims are allowable.

Claim 11 is allowable because Regev fails to remedy the deficiencies of claims 1 and 3, claims from which claim 11 depend.

In sum, even if the first requirement of MPEP § 2143 is satisfied, the third requirement of MPEP § 2143 is not satisfied in the Office Action, since the cited references, even after combination, fail to teach each and every element of the present invention. Thus, the present claims are allowable.

Lack of Suggestion or Motivation to Modify or Combine the References

MPEP § 2143.01 states that “the prior art *must* suggest the desirability of the invention.” (MPEP § 2143.01, subsection 1, emphasis added.) It is respectfully submitted that the Office Action does not provide a teaching in the art that would motivate one of ordinary skill in the art to modify any of the references, and thus a *prima facie* case of obviousness has not been established.

True, for each of the secondary references, the Office Action states a **result** of general implementation of the reference.¹ However, Applicants respectfully submit that a *result* is not the same as a *reason why* one of ordinary skill in the art would be motivated to combine the references, however desirable those results may be. If motivation to combine references to establish a *prima facie* case of obviousness could merely be satisfied by a result-oriented analysis of the prior art, the first requirement (and second requirement) of MPEP § 2143 would be completely vitiated. This is because by identifying references that teach each individual element of a claimed invention, implementation of the teachings of the cited references almost always necessarily provides results according to a given invention under examination. Indeed, such an analysis relies on impermissible circular reasoning.

In contrast to the result-oriented analysis proffered in the Office Action, the MPEP specifically states that “the prior art must suggest the desirability of the claimed invention.” The Office Action, in relying only on results, does not identify where the prior art suggests the desirability of a transmission according to the independent claims.

Still further, the Office Action appears to rely on the alleged ease by which the references can be combined, contrary to the procedures stipulated in the MPEP. The MPEP specifically states that the “mere fact that references can be combined or modified does **not**

¹ For example, in regard to combining Katsuyama with Kurata, the Office Action states that “it would have been obvious . . . to provide the idler roll structure of Kurata in the invention of Katsuyama. The reason for doing such would have been *to provide a means to assure that an intensity of tension applied to the printing substrate is kept substantially constant*. (Office Action, page 5, end of paragraph 6, emphasis added.) In regard to combining Regev with Katsuyama, the Office Action states that the “reason for performing the modification would have been *to enable the platen to move in small discrete steps of a few microns*. (Office Action, page 6, second full paragraph, emphasis added.)

render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” (MPEP § 2143.01, subsection 3, first sentence, citations omitted.)

Because the first requirement of MPEP § 2143 has not been satisfied in the office action, a *prima facie* case of obviousness has not been established against claims 7 and 9-11.

Therefore, these claims are allowable for at least this reason as well.

Conclusion

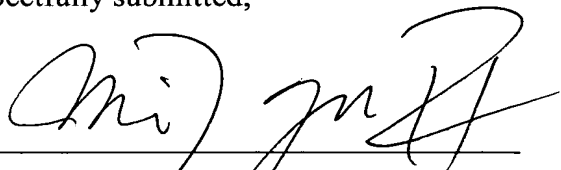
Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Huffman is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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